

**UNCLASSIFIED**

---

**AD 402 219**

*Reproduced  
by the*

**DEFENSE DOCUMENTATION CENTER**

**FOR**

**SCIENTIFIC AND TECHNICAL INFORMATION**

**CAMERON STATION, ALEXANDRIA, VIRGINIA**



---

**UNCLASSIFIED**

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

CATALOGED BY ASTIA  
AS AD No. 402219

# TECHNICAL MEMORANDUM

(TM Series)

## ASTIA AVAILABILITY NOTICE

Qualified requesters may obtain  
copies of this report from ASTIA.

This document was produced by SDC in performance of contract AF 19(628)-1648, Space  
Systems Division Program, for Space Systems Division, AFSC.

Utility System Programming Proposals  
Proposal for Modifying  
Prepare Master Tape II (PMTII) Routine

By  
R. L. Kinkead  
29 March 1963

Approved  
J. B. Munson

SYSTEM  
DEVELOPMENT  
CORPORATION  
2500 COLORADO AVE.  
SANTA MONICA  
CALIFORNIA

The views, conclusions or recommendations expressed in this document do not necessarily reflect the official views or policies of agencies of the United States Government.

Permission to quote from this document or to reproduce it, wholly or in part, should be obtained in advance from the System Development Corporation.

Although this document contains no classified information it has not been cleared for open publication by the Department of Defense. Open publication, wholly or in part, is prohibited without the prior approval of the System Development Corporation.



29 March 1963

-1-

TM-890/013/00

This document is one of a series of TM-890 volumes established for Utility System Programming proposals.

Comments on this document must be received by 22 April 1963 to be reflected in the final design criteria.

#### Proposal for Modifying Prepare Master Tape II (PMTII) Routine

PMTII mod AC would be modified to read and scan each element on the base tape to obtain its direct references, if the use of a base tape on unit one was specified on the function card. These references would then be used in developing the new master tape directory's cross-reference block in the same way as is done presently.

#### Purpose of Modification

In the present PMTII, extraneous references can occur as in the following example:

If the PREDICT function references the TAN routine directly and the TAN routine uses the SIN routine, then without distinguishing how TAN and SIN are referenced, the directory indicates that both TAN and SIN are required to operate PREDICT. Now, if the TAN routine is replaced by a version which no longer uses the SIN routine and PREDICT is not changed, then, although SIN is really no longer required by PREDICT, the new directory will still indicate that both TAN and SIN are required for the operating of PREDICT.

The reason for this is that direct references cannot be determined without scanning the routine, and this is done only for additions and routines which are changed. Hence, references indicated in the old directory for an unchanged routine are assumed to be valid and are carried over to the new directory.

29 March 1963

-2-  
(last page)

TM-890/013/00

The proposed modification would eliminate this type of problem by allowing the environment of every routine to be recomputed from their direct references.

#### Usage Changes Caused by Modification

No usage change is produced since the modification is for an internal operation.

#### Affect on Time Required to Prepare a Tape

The modification would cause an extra pass through the base tape and would necessitate an extra rewind of the base tape. The time for these two actions depends, of course, on the length of the master file on the base tape, but with the present file length the extra time required should be about one minute.

#### Implementation

The proposed modification, which is a fairly significant one, could be made at the same time the modifications for the Two Tape system are being made.

#### Reference

Prepare Master Tape II (PMTII), Mod AC, Milestone 7, TM-1099/000/00, System Development Corporation, 18 March 1963.

March 1963

TM-890/013/00

DISTRIBUTION LIST

External

Space Systems Division  
(Contracting Agency)  
Major C. R. Bond (SSOCD)

6594th Aerospace Test Wing  
(Contracting Agency)  
Col. A. W. Dill (TWRD)  
Lt. Col. M. S. McDowell (TWRU) (4)  
TWACS (6)  
V. Thomas

PIR-E1 (Lockheed)  
N. N. Epstein  
C. H. Finnie  
H. F. Grover  
H. R. Miller  
W. E. Moorman (5)  
461 Program Office  
698EK Program Office

PIR-E2 (Philco)  
J. A. Bean  
J. A. Isaacs  
R. Morrison  
S. M. Stanley

PIR-E3 (LFE)  
D. F. Criley  
K. B. Williams (5)

PIR-E8 (Mellonics)  
F. Druding

PIR-E5 (Aerospace)  
F. M. Adair  
R. D. Brandsberg  
R. V. Bigelow  
L. H. Garcia  
G. J. Hansen (3)  
C. S. Hoff  
L. J. Kreisberg  
T. R. Parkin  
E. E. Retzlaff  
H. M. Reynolds  
D. Saadeh  
R. G. Stephenson  
V. White

PIR-E7 (STL)  
A. J. Carlson

PIR-E4 (GE-Sunnyvale)  
J. Farrentine  
N. Kirby

PIR-E4 (GE-Santa Clara)  
D. Alexander

PIR-E4 (GE-Box 8555)  
J. S. Brainard  
R. J. Katucki  
J. D. Selby

PIR-E4 (GE-3198 Chestnut)  
J. F. Butler  
H. D. Gilman

PIR-E4 (GE-Bethesda)  
W. L. Massey

PIR-E4 (GE-Box 8661)  
J. D. Rogers

29 March 1963

TM-890/013/00

VORHAUS, A. H.  
WAGNER, I. T.  
WARSHAWSKY, S. B.  
WEST, G. D.  
WEST, G. P.  
WILSON, G. D.  
BUSCH, R. E.

24076A  
24093  
24097  
SUNNYVALE  
22116A  
24124  
22088B

WINSOR, M. E.  
WINTER, J. E.  
WISE, R. C.  
WONG, J. P.  
ZUBRIS, C. J.

22156  
24117  
22085  
SUNNYVALE  
24075

# DISTRIBUTION LIST

29 March 1963

Internal

TM-890/013/00

AFCP	(5)	KEY, C. D.	23013
ALLFREE, D.	24083	KEYES, R. A.	24073
ALPERIN, N. I.	22153	KINKEAD, R. L.	22093
ARMSTRONG, E.	24123	KNEEMEYER, J. A.	22088A
BERNARDS, R. M.	SUNNYVALE	KNIGHT, R. D.	22119
BIGGAR, D.	24118A	KOLBO, L. A.	22155
BILEK, R. W.	23007	KOSTINER, M.	14056B
BLACK, H.	14039	KRALIAN, R. P.	14039
BRENTON, L. R.	24103B	KRISTENSEN, K.	SUNNYVALE
BURKE, B. E.	24086	LACHAPELLE, F.	22093
CHAMPAIGN, M. E.	22152	LAUGHLIN, J. L.	24073
CHIODINI, C. M.	24091	LAVINE, J.	24093
CIACCIA, B. G.	24082A	LITTLE, J. L.	24088B
CLINE, B. J.	24127	LONG, F.	22156
COGLEY, J. L.	22156	MADRID, G. A.	22081
CONGER, L.	24088A	MAHON, G. A.	24089
COOLEY, P. R.	24081	MARIONI, J. D.	24076B
COURT, T. D.	24086B	MARTIN, W. P.	24127B
CRUM, D. W.	24105	MCKEOWN, J.	23013
DANT, G. B.	24086B	MICHAELSON, S. A.	14039
DECUIR, L. E.	24053A	MILANESE, J. J.	22155
DERANGO, W. C.	24082B	MUNSON, J. B.	22087A
DEXTER, G. W.	25016	MYERS, G. L.	14056A
DISSE, R. J.	23014	NELSON, P. A.	24075
DOBBS, G. H.	22116B	NG, J.	22077
DOBRUSKY, W. B.	24065A	NGOU, L.	24127
ELLIS, R. C.	22131A	PADGETT, L. A.	24110A
EMIGH, G. A.	14039	PATIN, O. E.	SUNNYVALE
ERICKSEN, S. R.	22113	POLK, T. W.	24113
FELKINS, J.	24097	PRUETT, B. R.	22084
FOSTER, G. A.	14039	RAYBIN, M.	14039
FRANKS, M. A.	24122	REILLY, D. F.	24121
FREY, C. R.	22078	REMSTAD, C. L.	25026
FRIEDEN, H. J.	22082	RUSSELL, R. S.	14054
GARDNER, S. A.	25026	SCHOLZ, J. W.	14039
GREENWALD, I. D.	22094A	SCOTT, R. J.	24110
GRIFFITH, E. L.	22081	SEACAT, C. M.	SUNNYVALE
HAAKE, J. W.	22153	SEIDEN, H. R.	22126B
HARRIS, E. D.	24081	SHAPIRO, R. S.	24110B
HENLEY, D. E.	22094B	SKELTON, R. H.	22148
HILL, C. L.	22101	SOLOMON, J.	22076
HILLHOUSE, J.	22078	SPEER, N. J.	24086A
HOLMES, M. A.	24103	STONE, E. S.	24058B
HOLZMAN, H. J.	24065B	SWEENEY, M. J.	25026
HOUGHTON, W. H.	24103B	TABER, W. E.	22101
HOYT, R. L.	14039	TENNANT, T. C.	27029
IMEL, L. E.	14039	TESTERMAN, W. D.	14039
KASTAMA, P. T.	22076	THOMPSON, J. W.	24088
KAYSER, F. M.	24109	THORNTON, R. L.	14050
KEDDY, J. R.	24105	TOTSCHKE, R. A.	24120



UNCLASSIFIED

System Development Corporation,  
Santa Monica, California  
UTILITY SYSTEM PROGRAMMING PROPOSALS -  
PROPOSAL FOR MODIFYING PREPARE MASTER  
TAPE II (PMTII) ROUTINE.  
Scientific rept., TM-890/013/00, by  
R. L. Kinhead. 29 March 1963, 2p., 1 ref.  
(Contract AF 19(628)-1648, Space Systems  
Division Program, Space Systems Division,  
AFSC)

Unclassified report

DESCRIPTORS: Programming (Computers).  
Satellite Networks.

Proposes that PMTII (Prepare Master  
Tape II) mod AC be modified to read

UNCLASSIFIED

---

and scan each element on the base  
tape to obtain its direct  
references, if the use of a base  
tape on unit one were specified on the  
function card. States that these  
references could then be used in  
developing the new master tape  
directory's cross-reference block  
as it is done at present.

UNCLASSIFIED

UNCLASSIFIED